

Page 1

Work Order ID 55781 February 1, 2010 10:11:27 AM Item ID: D206-667-203BL **Revision ID:** Ćrosstube Aft, Blue Item Name: Start Qty: 1.00 **Start Date:** 2/02/10 Req'd Qty: 1.00 Required Date: 2/18/10 Reference: Date:/6-02-1 Approvals: **Process Plan:** Date: QC: Sequence ID/ Operation **Work Center ID** Description **Revision Nbr** Draw Nbr D206-667-243 C



Accept



Setup Start

Reject

Qty

Stop



Cust Item ID: Customer:

Draw

Date:

Date:

Number - Rev.

Draw

Plan

Code Qty

Accept



Reject Insp.

Stamp

100 DC

⇒Document Control

DOCUMENT CONTROL

Memo Photocopy bluefile and create labels as per PPP D206-667-203

0.00

Tooling:

SPC (Y/N):

Set Up/

Run Hours

Number

110 CNC Bend 2

BENDING MACHINE - CROSSTUBES

Memo

0.00

CNC Alpha 160 Bender

Bend tube as per Dwg D206-667-243 using CNC bender program 206L-AF and Folio FT

120

OC

OC15- Crosstube Dimensional Check

0.00

Quality Control

Memo

W/O:			W	ORK ORDER CHANG	GES					
DATE	STEP	PRO	CEDURE CHA	NGE	E	Зу	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
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		•								
Part No	:	PAR #:	Fault Cate	egory:	NCR:	Yes N	o DQ A	۸:	_ Date: _	
	R	esolution:	Disposition	on:	QA: N	/C Clos	sed:		Date:	
NCR:		V	ORK ORD	ER NON-CONFORM	ANCE (NCR)	<u> </u>			
DATE	STEP	Description of NC	1		tion B	·····	Verific	ation	Approval	Approval
		Section A	Initial Chief Eng	Action Description Chief Eng		Sign & Date	Section	on C	Chief Eng	QC Inspector
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Work Order ID 55781

February 1, 2010 10:11:27 AM

Item ID:

D206-667-203BL

Accept



Setup Start



Revision ID:

Item Name:

Crosstube Aft, Blue

Start Date: 2/02/10 Required Date: 2/18/10

Start Qty: 1.00

Req'd Qty: 1.00



Date:

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

QC:

Date: Tooling: Date:

Date:

Run

Start

Stop

Stop



Sequence ID/ Work Center ID

130



Crosstubes

Crosstubes

Operation Description Set Up/ **Run Hours**

SPC (Y/N):

Draw Number Draw Rev.

Plan Qty Code

Accept Reject **Qty**

Reject Number Stamp

Insp.

Crosstubes

Memo

0.00

0.00

1-Drill pilot holes in tube using drill Jig DT8583 & DT8584 as per Dwg D206-667-243. Drill all (3) top holes.

2-Drill and Ream all holes in tube to finish size using drill Jig DT8583 & DT8584 as per Dwg D206-667-243 Check dimensions between holes on all four sides.

3-Flip tube and switch drilling Jigs from right to left, left to right. Locate Jigs off existing holes using "T" pins.

4-Drill pilot holes using drill Jig DT8583 & DT8584 as per Dwg D206-667-243. Drill only the top (2) holes.

5-Drill & ream the top (2) holes to finish size using drill Jig DT8583 & DT8584 as per Dwg D206-667-243

6-Drill Fwd rivet holes using drill Jig DT8789FWD as per Dwg D206-667-143.Note: Fwd side has 3x top holes.

7-Drill Aft rivet holes using drill Jig DT8789 as per Dwg D206-667-243.

8-C'sink holes as per Dwg D206-667-243.

9 -Scribe part # and batch # using vibrating stylus as per Dwg D206-667-243 Inside of Cuff(Donot engrave on outside of tube)

10 -Deburr & Inspect for surface damage. Repair damage within limits as per

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N/O:			W	ORK ORDER CHANG	ES			
DATE	STEP	PRO	OCEDURE CH	ANGE	Ву	Date G	Approval Chief Eng / Prod Mgr	Approval QC Inspector
Part No	:	PAR #:	Fault Cat	egory:	NCR: Yes	No DQA:_	Date: _	
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DATE	STEP Description of NC			Corrective Action Section		Verificati	on Approval	Approval
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February 1, 2010 10:11:27 AM

Item ID: **Revision ID:** D206-667-203BL

Crosstube Aft, Blue

Accept



Setup Start

Item Name: **Start Date:**

Required Date: 2/18/10

2/02/10

Start Qty: 1.00

Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date: _____ Tooling: Date:

Run

Start

Stop

Stop



QC: _____ Date: ____

SPC (Y/N):

Date:

Plan

Accept

Reject

Insp.

Sequence ID/ **Work Center ID** Operation Description

D206-667-243

Set Up/ **Run Hours**

Draw Number Draw Rev.

Code Qty Qty

Reject Number Stamp

140

HandFXtube

Memo

Crosstubes Chemical Conversion

0.00

0.00

1 - AWN 10-2-3

Hand Finishing Crosstubes

150

Quality Control

QC3- Inspect Part Finish

Memo

Memo

160

Quality Control

QC5- Inspect part completeness to step on W/O

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W/O:			WC	RK ORDER CHANC	GES				
DATE	STEP	PRO	OCEDURE CHAI	NGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
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Part No	:	PAR #:	Fault Cate	gory:	NCR: Yes	No DQA		Date:	
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NCR:			WORK ORD	R NON-CONFORM	ANCE (NCR)	1		
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Item ID:

D206-667-203BL

Accept

Setup Start

Stop



Revision ID:

Item Name:

Crosstube Aft, Blue

Start Date:

Required Date: 2/18/10

2/02/10

Start Qty: 1.00

Req'd Qty: 1.00

Operation

Description

Cust Item ID:

Customer:

Draw

Number

Reference:

Approvals:

Process Plan:

Date:

Tooling:

SPC (Y/N):

Set Up/

0.00

0.00

Run Hours

Date:

Date:

Draw

Rev.

Plan

Code

Accept

Qty

Start

Stop

Sequence ID/

Work Center ID

170

Outsource2

Outsource process - NDT

Memo

Outsource process - NDT per QSI038 4.1

Liquid Penetrant Inspection as per QSI 038Or

Issue P/O://3/2/ LPI as per ASTM 141/

Level 2 Attach copy of NDT results to work order

Date:

180

Packaging

Packaging

Packaging

Memo

0.00

0.00

Ensure copy of NDT results attached to work order.

190

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

Ensure results are as per Dwg D206-667-243

Run

Reject

Qty

Reject

Number Stamp

Dart Aeros	pace	Ltd
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W/O:			W	ORK ORDER CHANG	ES				
DATE	STEP	PRO	OCEDURE CHA	NGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
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Part No	:	PAR #:	Fault Cate	egory:	NCR: Yes	No DQ	A:	Date:	
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NCR:			WORK ORD	ER NON-CONFORMA	NCE (NCR)	-	· · · · · · · · · · · · · · · · · · ·	
DATE	STEP	Description of NC Section A	Initial	Corrective Action Section Action Description	on B Sign &		cation	Approval	Approval
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Work Order ID 55781

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Item ID:

D206-667-203BL

Accept

Setup Start

Stop



Revision ID:

Item Name:

Crosstube Aft, Blue

Start Date: Required Date: 2/18/10

Start Qty: 1.00 2/02/10

• Req'd Qty: 1.00



Cust Item ID:

Customer:

Draw

Number

Reference:

Approvals:

QC:

Process Plan:

Operation

SprayPaint

Description

Date:

Date:

Tooling:

SPC (Y/N):

Set Up/

Run Hours

Date:

Date:

Draw

Rev.

Plan

Code

Accept

Qty

Start Run

Reject

Qty

Stop



Number Stamp

Insp.

02 17 (1)

Reject

Sequence ID/

Work Center ID

200

SprayPaint Spray Painting Memo

0.00

0.00

1-Prime inside and outside crosstube grey as per QSI 005 4.2

2-Paint outside crosstube Primer: 110918

Delfleet Blue B //3/7/ Clear Delfleet B 110896 as per QSI 005 4.2

Start Time: 10:00 Fininsh Time: 11:00

PAINT:

Start Time:_3-00 Finish Time: 4'00

210

QC14- Inspect Spray Paint

0.00

Quality Control

Memo

Wrap in plastic bag to protect from scratches

0.00

RT 10-02-18

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W/O:			WO	RK ORDER CHANG	ES	•			-
DATE	STEP	PRO	OCEDURE CHAN	IGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
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Part No	:	PAR #:	Fault Categ	ory:	_ NCR: Yes	No DQ	A:	Date:	
		solution:							
NCR:			WORK ORDE	R NON-CONFORM	ANCE (NC	R)			
DATE	STEP Description of NC			ion B	Verific	cation	Approval	Approval	
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February 1, 2010 10:11:27 AM D206-667-203BL Item ID: **Revision ID:** Crosstube Aft, Blue Item Name: **Start Date:** 2/02/10 Start Qty: 1.00 Required Date: 2/18/10 Req'd Qty: 1.00 Reference: Process Plan: Date: Approvals: _____ Date: _____

Cust Item ID: Customer:

Accept

Tooling:

SPC (Y/N): Date: Plan Reject Operation Draw Draw Accept Reject Insp. Set Up/ Rev. Number Stamp Number Code Qty Qty Description **Run Hours** 0.00 Crosstubes 02 13 0.00 Memo

Date:

1-Install nut plates as per Dwg D206-667-243.

230

Skidtubes

0.00

0.00

Skidtubes

Sequence ID/

Crosstubes

Crosstubes

Skidtubes

220

Work Center ID

Memo

1-Install support using 0.03" to 0.06" thick layer of magnobond 6398 per QSI 015. Let cure for 12h after installation and prior to packaging. Note: (3) top

holes should be facing up.

A/R Magnobond 6398: 1124/7 exp. 01/2011

2-Install supports and clamps as per Dwg D206-667-243. Torque clamps to 80-100 in lb

Run

Start

Stop

Setup Start

Stop

02 18 (1)

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W/O:			WC	RK ORDER CHANG	GES			
DATE	STEP	PRO	OCEDURE CHAI	NGE	Ву	Date Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
Part No	:	PAR #:	Fault Cate	jory:	NCR: Yes	No DQA:	Date: _	
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NCR:			WORK ORDE	R NON-CONFORM	ANCE (NCR)		
DATE	STEP Description of NC				tion B	Verification	1 Approval	Approval
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Item ID:

D206-667-203BL

Accept

Setup Start

Stop

Revision ID:

Item Name:

Crosstube Aft, Blue

Start Date: Required Date: 2/18/10

2/02/10

Start Qty: 1.00

Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Date: _____

Tooling:

SPC (Y/N):

Date:

Date:

Run Start

Stop



Sequence ID/ Work Center ID

240

QC

Quality Control

Operation **Description**

QC5- Inspect part completeness to step on W/O

Memo

Memo

Memo

Set Up/ **Run Hours**

Draw Number Draw Plan Rev. Code

Accept Qty

Reject Qty

Reject Insp. Number Stamp

Packaging

Pick Kit

0.00

0.00

0.00

10-2-25

Packaging

250

260

QC

Quality Control

QC4-100% Inspect kits for completeness

0.00

	-									
W/O:			WC	RK ORDER CHAN	GES					····
DATE	STEP	PRO	OCEDURE CHA	NGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
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Part No	•	PAR #:	Fault Cate	gory:	NCR	: Yes	No DQ	\ :	_ Date: _	
Reso		olution:	Dispositio	າ:	QA:	N/C Clo	sed:		Date:	
NCR:		,	WORK ORDI	ER NON-CONFORM	IANCE	(NCR)			
DATE	STEP Description of NC				ction B	0: 0	Verific	ation	Approval	Approval
		Section A	Initial Chief Eng	Action Description Chief Eng		Sign & Date	Section	on C	Chief Eng	QC Inspector
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Work Order ID 55781



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Item ID:

D206-667-203BL

Accept



Setup Start

Stop



Revision ID:

Item Name:

Crosstube Aft, Blue

Start Date:

Required Date: 2/18/10

2/02/10

Start Qty: 1.00

Req'd Qty: 1.00



Cust Item ID:

Customer:

Draw

Number

Reference:

Approvals:

Process Plan:

Operation

Description

Date: _____

Tooling:

0.00

0.00

SPC (Y/N):

Set Up/

Run Hours

Date: Date:

Draw

Rev.

Plan

Code

Qty

Start Run

Stop

Sequence ID/ Work Center ID

270

Packaging

Packaging

Packaging

Memo

Identify and pack for shipping as per PPP D206-667-203

Date:_____

Location:

PPP Rev:

280

QC

Quality Control

OC21- Final Inspection - Work Order Release

0.00

Memo

0.00

Reject Accept Qty

Reject Insp. Number Stamp

V Coion. 26

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W/O:			WC	ORK ORDER CHANG	GES				-	
DATE	STEP	PRO	OCEDURE CHA	NGE	Ву	,	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
						·				
Part No	:	PAR #:	Fault Cate	gory:	NCR: Y	es N	o DQ	4 :	Date:	1
Resolution:										
NCR:			WORK ORDI	ER NON-CONFORM	IANCE (N	CR)		<u> </u>	_	
DATE	STEP	STEP Description of NC			ction B		Verific	ation	Approval	Approval
	0121	Section A	Initial Chief Eng	Action Description Chief Eng		in & ate	Section		Chief Eng	QC Inspector

Picklist Print

February 1, 2010 10:11:32 AM

Work Order ID: 55781

Parent Item:

D206-667-203BL

Parent Item Name: Crosstube Aft, Blue

Comments:



Start Date: 2/02/10

Required Date: 2/18/10

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch		Primary Location	Last Location	Route · Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN5-10A		Purchased	No				Each	102.0000	10.0000	0-2-25)

Warehouse	Loc Oty	Loc Code	
Location			
Main Warehouse			
ST	102		
107013	8		
110363	2		
112314	1		
113149	1		15
113524	90		70
-	Fach	172 0000 4 0000	

AN5-32A

Purchased No

16-2-25-01

Warehouse	Loc Oty	Loc Code	
Location			
Main Warehouse			
ST	172		
106242	3		
106519	4		
110363	17		1
112933	48		7
113121	100		•

Dart Aerospace I	Lta
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W/O:			WC	ORK ORDER CHANG	GES					
DATE	STEP	PRO	OCEDURE CHA	NGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
										
Part No	•	PAR #:	Fault Cate	gory:	NCI	R: Yes	No DQ	A:	Date:	L
_	R	esolution:	Dispositio	n:	QA	: N/C CI	osed:		Date: _	·
NCR:			WORK ORD	ER NON-CONFORM	ANCE	(NCR)			
DATE	STEP	Description of NC	Corrective Action Section E				Verific	cation	Approval	Approval
		Section A	Initial Chief Eng	Action Description Chief Eng		Sign & Date	Secti	on C	Chief Eng	QC Inspector

February 1, 2010 10:11:32 AM

Work Order ID: 55781

Parent Item:

D206-667-203BL

Parent Item Name:

Crosstube Aft, Blue

Comments:



Start Date: 2/02/10

Required Date: 2/18/10

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/	Replacement	Mfg/	Bin	Primary	Last	Route	Unit of	Qty on	Remaining	Qty	Date	Status
Item Name	Item ID	Purch	Item	Location	Location	Seq ID	Measure	Hand	Qty To Pick	Issued	Issued	
AN5-34A		Purchased	No		· · ·		Each	146.0000	4.0000 	·a ·25 5		



Warehouse	Loc Qty	Loc Code		
Location				
Main Warehouse				
ST	146			
104679	2			
107013	2			
<u>. 113149</u>	92			<u>4</u>
113226	50			<u>t</u>
	Each	0.0000	18.0000	
				MU3524 SP
	Each	4.0000	1.0000	
				MB 10-02-02

NASII49D05637 QSI 01750 AN960JD516 Purchased Washer	No	104679 107013 113149 113226	2 2 92 50 Each	0.0000	18.0000
D206-667-203TRN Manufactured Crosstube Turning Detail	No		Each	4.0000	1.0000
		Warehouse	Loc Qty	Loc Code	
		Location			
		Main Warehouse			

FG

53414

53649 53651 MB ho-oror

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W/O:			WC	RK ORDER CHANG	iES				
DATE	STEP	PR	OCEDURE CHAI	***	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
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						14			
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Part No	:	PAR #:	Fault Cate	gory:	_ NCR: Yes	No DQ	A:	Date:	
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NCR:			WORK ORDE	R NON-CONFORMA	ANCE (NC	R)			
DATE	STEP	Description of NC		ion B	Verific	ation	Approval	Approval	
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Picklist Print

February 1, 2010 10:11:32 AM

Page 3

Work Order ID: 55781

Parent Item:

D206-667-203BL

Parent Item Name: Crosstube Aft, Blue

Comments:



Start Date: 2/02/10

Required Date: 2/18/10

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/	Replacement	Mfg/	Bin Primary	Last	Route	Unit of	Qty on	Remaining	Qty	Date	Status
Item Name	Item ID	Purch	Item Location	Location	Seq ID	Measure	Hand	Qty To Pick	Issued	Issued	
D2873-043		Manufactured	No			Each	47.0000	2.0000			



Nut Plate Assembly

<u>Warehouse</u>	Loc Qty	Loc Code		
Location				
Main Warehouse				
ST	47			
45370	2			
45422	1			
50002	4			
50871	20			
53966	20			
	Each	65.0000	2.0000	

D2873-045

Manufactured



Nut Plate Assembly

Warehouse Location	Loc Qty	Loc Code	1	
Main Warehouse			WI	10
ST	65			
45210	3			
50001	22			
53967	20			
53968	20			

N/O:		WORK ORDER CHANGES											
DATE	STEP	PRO	OCEDURE CHA	NGE	Ву	Date C	Approval Chief Eng / Prod Mgr	Approval QC Inspector					
Part No	:	PAR #:	Fault Cate	dorv.	NCR: Yes	No. DOA:	Date						
					QA: N/C Closed: Date:								
			WORK ORDER NON-CONFORMANCE (NCR)										
DATE	STEP	Description of NC Section A	Initial Chief Eng	Corrective Action Sect Action Description Chief Eng	cription Sign &		On Approval Chief Eng	Approval QC Inspector					
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Picklist Print

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February 1, 2010 10:11:32 AM

Work Order ID: 55781

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D206-667-203BL

Parent Item Name: Crosstube Aft, Blue

Comments:



Start Date: 2/02/10

Required Date: 2/18/10

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2892-1		Manufactured	No				Each	51.0000	2.0000			
BUL	1			Warehou Loca		<u>Loc (</u>	<u>Oty</u>	Loc Code			m	10/02/18
, , , , ,				Main Wa	rehouse							,
				ST			51					
					41986		12					
					42785		20		_			
					53124		13		_			
				_	53348		6		_			
D3595-063-450		Manufactured	No				Each	156.1266	4.0000			

RUBBER CUSHION

Warehouse Location	Loc Qty	Loc Code	
Main Warehouse			
LG	51.15767369		
52447	51.1576737		
Main Warehouse			
ST	104.9689		
38959	2		
43210	2.59		
46465	0.3789		
53775 AAAA	100		

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W/O:		WORK ORDER CHANGES											
DATE	STEP	PRO	OCEDURE CHAN	IGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector				
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								4,74					
Part No		PAR #:	Fault Categ	ory:	_ NCR: Yes	No DQ	A :	Date: _					
	Res	olution:	Disposition	:	QA: N/C C	losed:		Date:					
NCR:		· · · · · · · · · · · · · · · · · · ·	WORK ORDER NON-CONFORMANCE (NCR) Corrective Action Section B										
DATE	STEP	Description of NC		tion B	Verific	cation	Approval	Approval					
	J	Section A	Initial Chief Eng	Action Description Chief Eng	Sign of Date	Secti		Chief Eng	QC Inspector				
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February 1, 2010 10:11:32 AM

Work Order ID: 55781

Parent Item:

D206-667-203BL

Parent Item Name: Crosstube Aft, Blue

Comments:



Start Date: 2/02/10

Required Date: 2/18/10

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MS20601-AD4W10		Purchased	No	<u>—</u>			Each	159.0000	14.0000			

RIVET

	Warehouse	Loc Oty	Loc Code	٨			
	Location			/m	۱۸	••	
	Main Warehouse			(10	02	18
	ST	159					
	110665_	16					
	111177	43					
	113220	100					
9		Each	533.0000 4.0000	\wedge			
			1 (4 1) (4 1)				



Purchased

No

(0-2-25 SV

Warehouse	Loc Qty	Loc Code	
Location			
Main Warehouse			
ST	533		
110382	10		
111636	1		
112314	22		
113523	300		9
113537	200		

Dart /	Aeros _i	pace	Ltd
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W/O:		WORK ORDER CHANGES											
DATE	STEP	PR	OCEDURE CHAI	NGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector				
		-											
Part No	:	PAR #:	Fault Cated	nory:	NCP: You	No DOA:	-,	Data					
		olution:											
NCR:				R NON-CONFORM									
DATE	STEP	Description of NC			tion B	Verifica	Verification Section C		Approval				
	0.2	Section A	Initial Chief Eng	Action Description Chief Eng	Sign Date	Section			QC Inspector				
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Picklist Print

February 1, 2010 10:11:32 AM

Work Order ID: 55781

Parent Item:

D206-667-203BL

Parent Item Name: Crosstube Aft, Blue

Comments:

Component Item ID/	Replacement	Mfg/
Item Name	Item ID	Purch

MS21920-22

Purchased



Clamp(per MIL-DTL-8783C)



Start Date: 2/02/10

Required Date: 2/18/10

Page 6

Start Qty: 1.00

Required Qty: 1.00

	Primary Location	Last Location	Route Seq ID			Remaining Qty To Pick	Qty Issued	Date Issued	Status
No				Each	62.0000	4.0000			

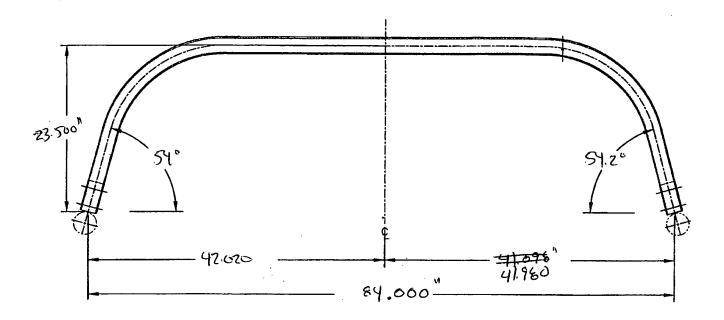
Warehouse	Loc Oty	Loc Code	1
Location			/
Main Warehouse			M/ 10 02 18
ST	62		
109495	6		
110260	6		
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W/O:			V	VORK ORDER	R CHANG	iES						
DATE	STEP	PROC	PROCEDURE CHANGE					Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
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Part No	•	PAR #:	_ Fault Ca	tegory:		_ NC	R: Yes N	lo DQA	\:	Date:		
	R	esolution:	Disposi	_ Disposition: Q/				QA: N/C Closed: 1			Date:	
NCR:	-	W	ORK OR	DER NON-CO	NFORM	ANCE	(NCR))			-	
DATE	STEP	Description of NC	Corrective Action Section B			ion B	Verification		ation	Approval App	Approval	
DAIL	SIEP	Section A	Initial Chief Eng		escription of Eng		Sign & Date	Section C	Chief Eng	QC Inspector		
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DART AEROSPACE LTD	Work Order:	55781
Description: Crosstube High Aft (206L)	Part Number:	D206-667-203
Inspection Dwg: D206-667-243 Rev: C		Page 1 of 1

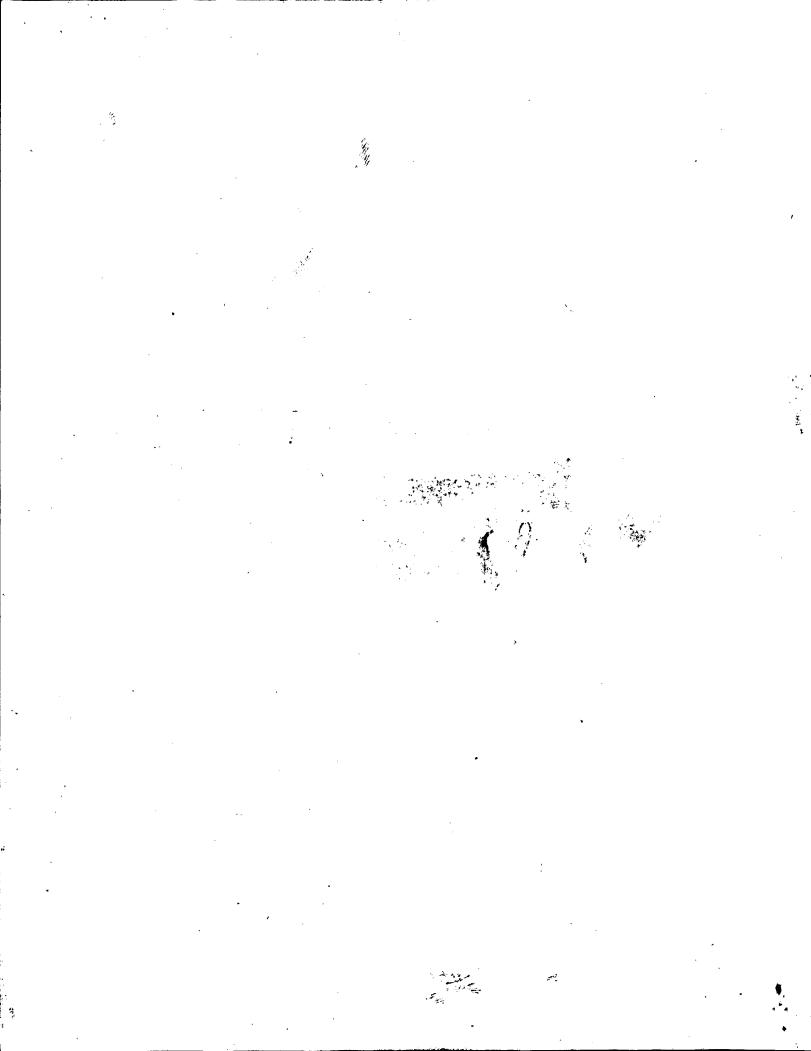
Required Dimension	Min	Max
Height	23.39	23.65
1/2 Span	41.79	42.05
Angle	54	56
Total Span	83.58	84.1



 Comments	

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QC15 Inspection	2)	
Date	101	v2	n	

Rev	Date	Change	Revised by	Approved
Α	07.02.06	New Issue	KJ/JM	
В	09.11.17	Dwg Rev updated	KJ /A	
С	09.12.14	Dimensions update per Dwg Rev C	KJ 🗫	M
			7/	1



Qtv Part Number Description -243 $\overline{\mathbf{x}}$ D206-667-243 CROSSTUBE ASSEMBLY (206L HIGH AFT) D6004-115 CROSSTUBE 2 D2873-043 **NUT PLATE NUT PLATE** 2 D2873-045 D2892-1 SUPPORT D3595-063-450 RUBBER CUSHION 6 7 4 MS21920-22 CLAMP RIVET (OR NAS9302B-4-10) 8 14 MS20601AD4W10 ROCKWELL SPECIFICATION RBO-120-023 MAGNOBOND 6398 A/R ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)

GENERAL NOTES:

8

1) MATERIAL: MANUFACTURED FROM D6004-115

FINISHED LENGTH = 104.91±0.020

2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2 PAINT OUTSIDE PER DART QSI 005 4.2

3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.

UNITS: INCHES UNLESS OTHERWISE NOTED.

BREAK SHARP EDGES: 0.005 TO 0.010 MAX.

IDENTIFICATION: SCRIBE DART PART NUMBER "D206-667-243" AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS.

WEIGHT: 21.9 lbs

8

PART IS SYMMETRIC ABOUT CENTERLINE.

RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.

10) BEND PROGRESSIVELY WITH A MINIMUM OF 8 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.

11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.

12) INSTALL D2892-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.

13) INSTALL MS21920-22 CLAMPS WITH D3595-063-450 RUBBER CUSHIONS TO SECURE THE D2892-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMP MECHANISMS ARE LOCATED ON CROSSTUBE SUPPORTS.

14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY, CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.

15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

SHOP COPY **RETURN TO ENGINEERING** UNCONTROLLED COPY SUBJECT TO AMENDMENT WITHOUT NOTICE

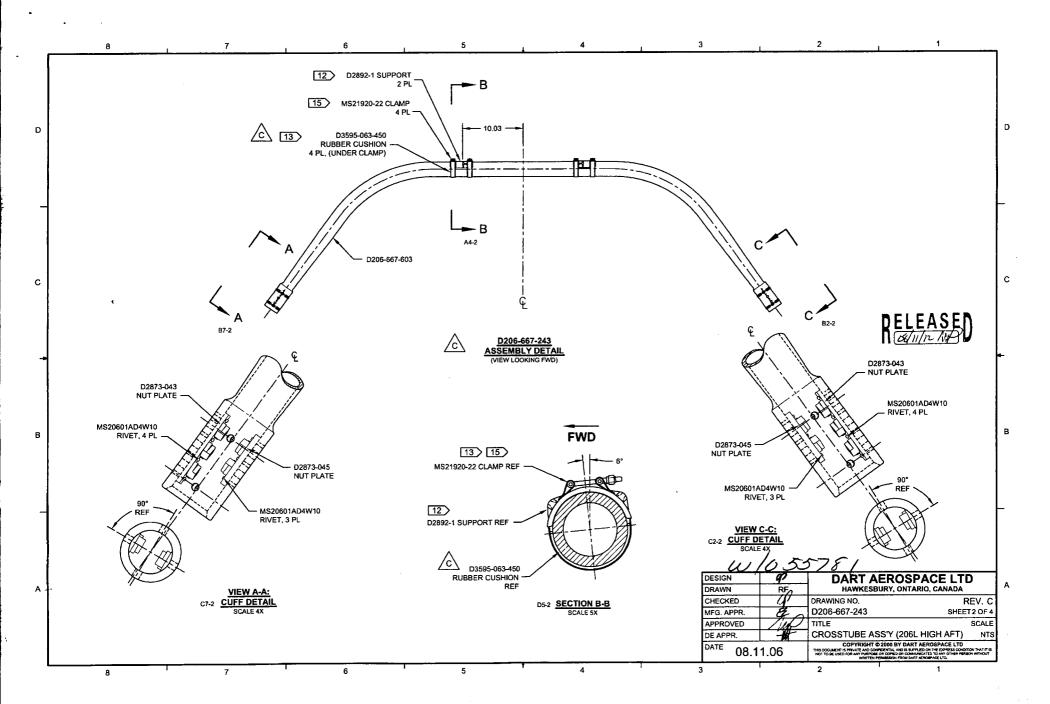
WORK ORDER, NO. 5578/ BS 10-02-01

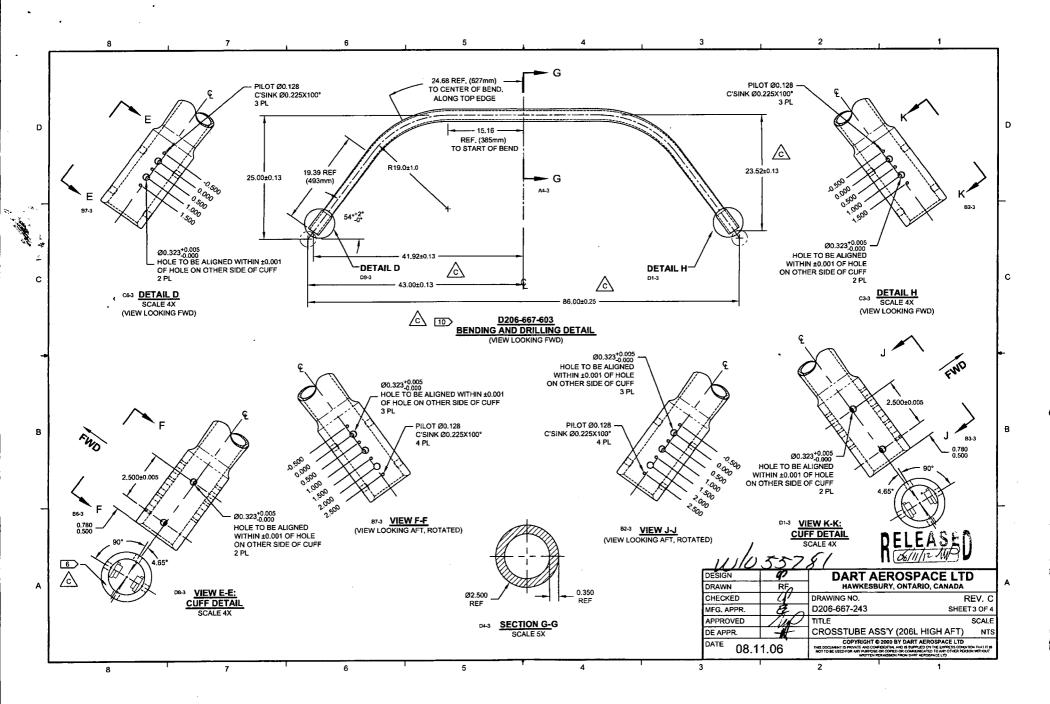


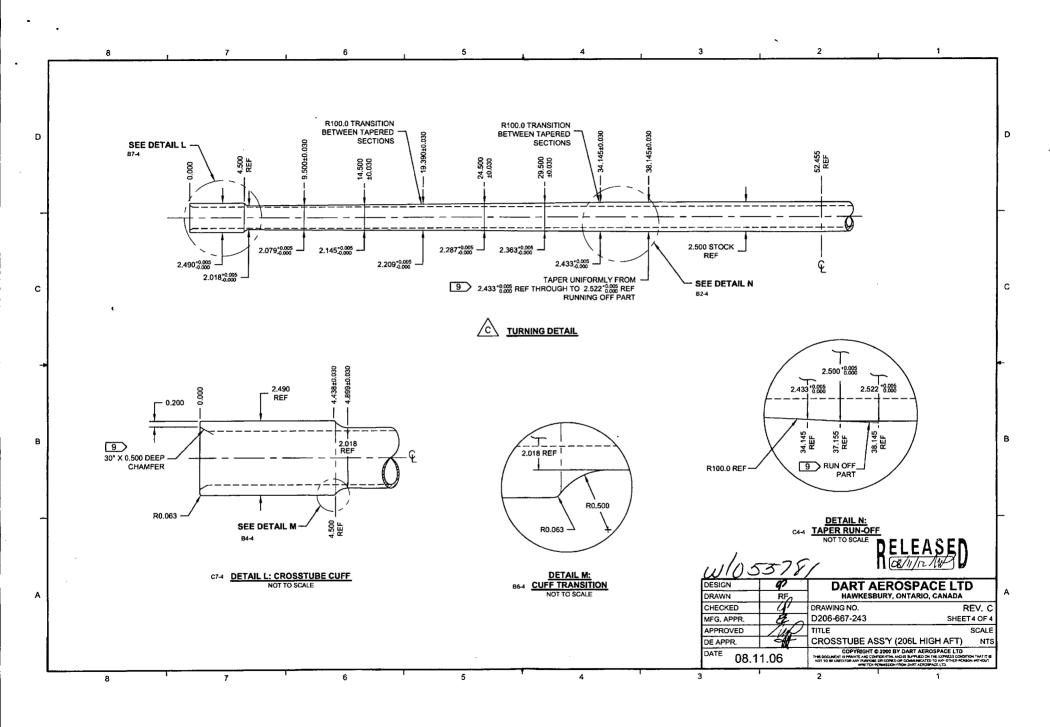
08.11.06 REVISE GENERAL NOTES/PART LIST (ZN D7-1); REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS. D3595-063-450 WAS D2856-400-773 (ZN D6-2 & A5-2); REMOVED REF. & ADD TOLERANCES (ZN 4-3, C5-3, D3-3); RELOCATED FLAG #6 (ZN A8-3) PER NCR 210; MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4. ADD HOLES AND NUT PLATES FOR COMPATABILITY 05.07.26 WITH BHT/AA SKUDTUBES **NEW ISSUE** CP 00.11.17 REV. DESCRIPTION BY DATE

DESIGN	47	DARI AERUSPACE LI	ו ט			
DRAWN	RF ₂	HAWKESBURY, ONTARIO, CANADA				
CHECKED .	a	DRAWING NO.	REV. C			
MFG. APPR.	80	D206-667-243 SHE	ET1 OF 4			
APPROVED	111	TITLE	SCALE			
DE APPR.	-74	CROSSTUBE ASS'Y (206L HIGH AFT)	NTS			
DATE 08.11.06 COPYRIGHT 0 2006 BY DART AEROSPACE LTD HIS COLOMBY IN PRIVATE HIS CONTROL OF THE PRIVATE HIS CONTROL OF THE PRIVATION OF THE PRIVATE HIS CONTROL OF THE PRIVATE HIS CONTR						

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LIQUID PENETRANT TEST REPORT

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SCRIPTION	PROCEDURE	No. LTざぬ文Rev.	/DATE		TECHNIQUE N O	LT-(Sciff J	REV./DA	ATE	
<u> </u>				MATERIAL ALLIE	INE ALL	MINIGAL TH	ICKNESS		
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		D 047		100 %	EX TE	INAL.			
ETAILS									
EIAILO	FLUORESCENT	☐ VISIBLE		ថ្ម Water Wash		SOLVENT REM	OVABLE		EMULSIFIED
	Buaffux			BLACK LIGHT S/N LIGHTING EQUIP.	16839 =	OUTPUT > 100	0 μ W/cm²	☐ AMBIE	NT < 2 fC
		VELL TIME 45 16 210		CTHER 6		T I ROUBLELIGE	11 4 00	1701710010	000000000000000000000000000000000000000
NT REMOVER /ゲ			Min.	LIGHT METER S/N	10986	366		UE DATE	
	Non Aqueous 🖫 Aq						NA	15 7-3	2010
URFACE					<u></u>				
	7.10 01.10	☐ AS WELDED	0:0/50	MACHINED	SHOT BL	ASTED I°F TO 52°C/125		CLEAN BAR > 52°C/125	
TEMPERATURE TS-	<-4°C/20°F METRIC IMPERIAL	☐ - 4°C/ 20°F TO 1	0°C/50°	1	E 10°C/50	1-F 10 32 C/120	, , , ,	- 32 0/120	
CE 638 TUP 1208 STUP 63088 TUB	18 w.c. 551	96 V 99 V 180 V	, was a second	T415 1	COPORT	5 EX AM - 1990 E - 5 TA	BE.	EN	
criptions, comments and exp ions or warranties. Acusen er information provided by .	o perform services extends only to the oversions of opinion reflect the opin Group Inc. is not assuming any vey Acuren Group Inc. In no event shall carren Group Inc. uses the degree, extended from Inc.	ons or onservations of scures on some of the ownersone of the ownersone of Acuren Group Inc.'s liability are and skill ordinarily exercis	i Group me utor and th in respect o	t busea on injormation and the owner/operator retains of the services referred to be	omplete responsibility erein exceed the amou ers performing such s	for the engineering, n ant paid for such service	ianafacture, re _l es. similar locality	pair and use decis	sions as a result of the
	CGSB LEVEL CGSB REG. NO	SNT LEVEL	CGSB L	EVEL SN	T LEVEL			-	